

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (original): An optical fiber array comprising a plurality of optical-fiber bare fibers which are disposed in alignment between two opposing plate members and are optically connected to connection elements in an end-to-end facing arrangement with each other, wherein;

the optical-fiber bare fibers are disposed in contact with a flat surface of one plate member A, an adjustment layer formed of an adhesive is interposed between another plate member B and the plate member A, where a flat surface of the plate member B on its side opposite to the adjustment layer serves as a disposition standard surface when the array is set in; and

the adjustment layer, which fulfills conditions of $(d_{\max} + r) < H$ where the desired preset distance from i) a central line of the optical-fiber bare fibers which is formed by connecting central points of end cross sections in the optical-fiber bare fibers disposed in alignment to ii) the disposition standard surface is represented by H, the maximum value of the thickness dimension in the plate member B by d_{\max} , and the radius of the end cross sections of the respective optical-fiber bare fibers by r, compensates a deviation from the preset distance H that is caused by a non-uniformity in thickness dimension in the plate member B, whereby the distance from the central points of the respective optical-fiber bare fibers to the disposition standard surface is set identical or substantially identical to the preset distance H.

Claim 2 (original): The optical fiber array according to claim 1, wherein said adjustment layer comprises a mixture of a resin and an inorganic filler.

Claim 3 (original): The optical fiber array according to claim 2, wherein said resin is a cured product of a light-curable resin.

Claim 4 (original): The optical fiber array according to any one of claims 1 to 3, wherein the distance from the central points of the respective optical-fiber bare fibers to the disposition standard surface has an accuracy of $\pm 5 \mu\text{m}$ or less in respect to the desired preset distance H.

Claim 5 (Currently Amended): The optical fiber array according to any one of claims 1 to 3, wherein ~~[[the]]~~ a horizontal distance W between one lateral surface of at least one of the plate member-A and the plate member-B and the central point of an end cross section of an arbitrary optical-fiber bare fiber has an accuracy of $\pm 5 \mu\text{m}$ or less in respect to the desired preset value.

Claim 6 (Currently Amended): A method for manufacturing an optical fiber array comprising a plurality of optical-fiber bare fibers which are disposed in alignment between two opposing plate members and are optically connected to connection elements in an end-to-end facing arrangement with each other; the method comprising the steps of:

fixing respective optical-fiber bare fibers held in rows of V grooves of an optical-fiber bare

fiber alignment guide, onto a flat surface of a plate member A to form a fixed member consisting of the plate member A and a plurality of optical-fiber bare fibers;

adjusting the posture of at least one of the fixed member and a predetermined standard plane while bringing the respective outer peripheral surfaces of the optical-fiber bare fibers fixed to the flat surface of the plate member A, into contact with the standard plane, to ensure the parallelism between i) a central line of the optical-fiber bare fibers which is formed by connecting central points of end cross sections of the optical-fiber bare fibers in the fixed member and ii) the standard plane, and to set to zero [[the]] a vertical distance between i) the respective outer peripheral surfaces of the optical-fiber bare fibers kept in contact with the standard plane and ii) the standard plane;

separating the fixed member and the standard plane by a stated distance while maintaining the parallelism between the central line of the optical-fiber bare fibers in the fixed member and the standard plane, and thereafter disposing another plate member B on the standard plane;

making the fixed member and the standard plane close by a stated distance while maintaining the parallelism between the central line of the optical-fiber bare fibers in the fixed member and the standard plane, and thereafter joining the plate member B disposed on the standard plane and the plate member A of the fixed member in the state an adhesive is interposed between them; and

curing the adhesive to form an adjustment layer to set the distance from the central points of the respective optical-fiber bare fibers to the disposition standard surface identical or substantially identical to the preset distance H; the adjustment layer fulfilling conditions of $(d_{\max} + r) < H$ where the desired preset distance from the central line of the optical-fiber bare fibers to the standard plane is represented by H, the maximum value of the thickness dimension in the plate member B by d_{\max} ,

and the radius of the end cross sections of the respective optical-fiber bare fibers by r .

Claim 7 (Currently Amended): The optical fiber array manufacturing method according to claim 6, wherein said optical-fiber bare fiber alignment guide is so disposed that ~~[[the]]~~ a horizontal distance between a row of the V-grooves and one lateral surface of the plate member A comes to be a stated value, and the respective optical-fiber bare fibers held in the V grooves of this optical-fiber bare fiber alignment guide are fixed onto the flat surface of the plate member A to form the fixed member consisting of the plate member A and the optical-fiber bare fibers.

Claim 8 (original): The optical fiber array manufacturing method according to claim 6 or 7, wherein the horizontal distance between one lateral surface of the plate member B disposed on the standard plane and one lateral surface of the plate member A in the fixed member is adjusted to come to be a stated value, then the plate member B and the plate member A of the fixed member are joined in the state the adhesive is interposed between them, and thereafter the adhesive is cured.